Index to

EXPERIMENTAL MECHANICS

VOLUME 39, 1999

TITLE INDEX

The Application of Evolutionary and Maximum Entropy Algorithms to Photoelastic Spectral Analysis—M. N. Pacey, X. Z. Wang, S. J. Haake and E. A. Patterson, 265-273 (Dec.).

Axial Crack Propagation and Arrest in a Pressurized Cylinder: An Experimental-numerical Analysis—M. Kosai, A. Shimamoto, C. T. Yu, A. S. Kobayashi and P. W. Tan, 256-264 (Dec.).

Buckling of Composite Panels Subjected to Biaxial Loading—M. Tuttle, P. Singhatanadgid and G. Hinds, 191-201 (Sept.).

Characterization of Story-level Seismic Damage Using an Energy-based Damage Model—Y. H. Chai, 53-61 (Mar.).

Compression Strain Measurement Digital Speckle Correlation—D. Zhang, X. Zhang and G. Cheng, 62-65 (Mar.).

Cyclic Stress-strain Data Analysis Under Biaxial Tensile Stress State—A. Zouani, T. Bui-Quoc and M. Bernard, 92-102 (June).

Determination of Residual Stress Fields Beneath a Vickers Indentation Using Photoelasticity—R. J. Anton, I. Miskioglu and G. Subhash, 227-230 (Sept.).

Determination of Shear Modulus of Single Fibers—C.-L. Tsai and I. M. Daniel, 284-287 (Dec.).

Digital Volume Correlation: Three-dimensional Strain Mapping Using X-ray Tomography—B. K. Bay, T. S. Smith, D. P. Fyhrie and M. Saad, 217-226 (Sept.).

The Effects of Surface Topography on the Method of Caustics—R. A. Tomlinson and E. A. Patterson, 335-342 (Dec.).

Experimental Caustics Analysis in Fracture Mechanics of Anisotropic Materials—D. Semenski and S. Jecić, 177-183 (Sept.).

Experimental Examination of Bicycle Chain Forces—M. D. Kidd, N. E. Loch and R. L. Reuben, 278-283 (Dec.).

Experimentation and Modeling of Composite Materials—I. M. Daniel, 1-19 (Mar.).

A Fiber Optic Sensor for Transverse Strain Measurement—C. M. Lawrence, D. V. Nelson, E. Udd and T. Bennett, 202-209 (Sept.).

High-sensitivity Laser-based Ultrasonic C-scan System for Materials Inspection—F. Lanza di Scalea and R. E. Green, 329-334 (Dec.).

Impact-induced Transient Deformation Analysis by Means of Digital Speckle Pattern Interferometry—F. V. Díaz and G. H. Kaufmann, 311-316 (Dec.).

Improving Impact Tolerance of Portable Electronic Products: Case Study of Cellular Phones—S. Goyal, S. Upasani and D. M. Patel, 43-52 (Mar.).

Interpretation of Experimental Data for Poisson's Ratio of Highly Nonlinear Materials—C. W. Smith, R. J. Wootton and K. E. Evans, 356-362 (Dec.).

Investigation on Mechanism of Plastic Deformation by Digital Speckle Pattern Interferometry—X. L. Gong and S. Toyooka, 25-29 (Mar.).

Lateral Compression of Thin-walled Tubes: Strain Measurement by Image Analysis—M. Avalle and L. Goglio, 231-235 (Sept.).

Limiting Conditions for Compression Testing of Flat Specimens in the Split Hopkinson Pressure Bar—U. Zencker and R. Clos, 343-348 (Dec.).

Local Crack Tip Strain Behavior During Fatigue Crack Initiation and Propagation in Polycarbonate—A. Shimamoto and E. Umezaki, 111-116 (June).

Methodology for Minimizing Effects of Temperature in Monitoring with the Acousto-ultrasonic Technique—A. Mazzeranghi and D. Vangi, 86-91 (June).

A Model for the Time Response of Solid-embedded Thermocouples—Y. Rabin and D. Rittel, 132-136 (June).

A Modified Torsional Kolsky Bar for Investigating Dynamic Friction—S. Rajagopalan and V. Prakash, 295-303 (Dec.).

A Multilevel Treatment of Moiré Fringe Data Using Finite Elements—C. E. Freese and L. Gee, 304-310 (Dec.).

A New Approach for Improving Ballistic Performance of Composite Armor—V. Parameswaran, W. Bentley, A. Shukla and R. A. Prosser, 103-110 (June).

Novel Procedure for Complete In-plane Composite Characterization Using a Single T-shaped Specimen—M. Grédiac, F. Pierron and Y. Surrel, 142-149 (June).

A Novel Technique for the Fabrication of Laboratory Scale Model Functionally Graded Materials—J. Lambros, M. H. Santare, H. Li and G. H. Sapna III, 184-190 (Sept.).

Optimal Calculation Steps for the Evaluation of Residual Stress by the Incremental Hole-drilling Method—B. Zuccarello, 117-124 (June).

Phase-stepped Deflectometry Applied to Shape Measurement of Bent Plates—Y. Surrel, N. Fournier, M. Grédiac and P.-A. Paris, 66-70 (Mar.).

Prediction of Longitudinal Disturbances in a Multimode Cylindrical Waveguide—M. L. Peterson, 36-42 (Mar.).

Problems of Holographic Interferometry—K. A. Stetson, 249-255 (Dec.).

A Procedure for Correction of Creep in Foam Rubber Optical Pressure Measurement Techniques—S. R. Chacko and S. M. Sivakumar, 125-131 (June).

Process Zone of Polycrystalline Alumina—D. K. Tran, A. S. Kobayashi and K. W. White, 20-24 (Mar.).

Sensitivity of the Shear Gage to Normal Strains—X. Niu, P. Ifju and A. Abdel-Hadi, 236-241 (Sept.).

Separation of Elastic Waves in Split Hopkinson Bars Using One-point Strain Measurements—S. W. Park and M. Zhou, 287-294 (Dec.).

Simplified Experimental Calibration for a Tridilosa-type Bridge Finite Element Model—F. J. Carrión, A. Lozano, M. J. Fabela and D. Vázquez-Vega, 324-328 (Dec.).

A Split Hopkinson Bar Technique for Low-impedance Materials—W. Chen, B. Zhang and M. J. Forrestal, 81-85 (June).

Static and Dynamic Response of a Multiplexed-array Piezoresistive Contact Sensor—J. K. Otto, T. D. Brown and J. J. Callaghan, 317-323 (Dec.).

Strain Tensor for Large Three-dimensional Surface Deformation of Sheet Metal from an Object Grating—K. Andresen, 30-35 (Mar.).

Study of the Mechanical Properties of Plain Concrete Under Dynamic Loading—C. Albertini, E. Cadoni and K. Labibes, 137-141 (June).

Tensile Testing of Microsamples—D. A. LaVan and W. N. Sharpe, Jr., 210-216 (Sept.).

Tensile Testing of Polysilicon—W. N. Sharpe, Jr., K. T. Turner and R. L. Edwards, 162-170 (Sept.).

Thermoelastic-numerical Hybrid Analysis of Holes and Cracks in Composites—J. Rhee and R. E. Rowlands, 349-355 (Dec.).

A Thin-Sheet, Combined Tension and Bending Specimen—S. A. Fawaz and J.J.M. De Rijck, 171-176 (Sept.).

Two-wavelength Method for Full-field Automated Photoelasticity—N. Plouzennec and A. Lagarde, 274-277 (Dec.).

Ultimate Load-bearing Capacity of the Corrugated Floor Sheet in Railroad Vehicles—V. Lucanin, 150-153 (June).

Whole-field Residual Stress Measurement in Rail Using Moiré, Interferometry and Twyman/Green Interferometry via Thermal Annealing—B. S. Wang, F. P. Chiang and S. Y. Wu, 71-76 (Mar.).

AUTHOR INDEX

Abdel-Hadi, A.—Sensitivity of the Shear Gage to Normal Strains, 236-241 (Sept.).

Albertini, C.—Study of the Mechanical Properties of Plain Concrete Under Dynamic Loading, 137-141 (June).

Andresen, K.—Strain Tensor for Large Three-dimensional Surface Deformation of Sheet Metal from an Object Grating, 30-35 (Mar.).

Anton, R. J.—Determination of Residual Stress Fields Beneath a Vickers Indentation Using Photoelasticity, 227-230 (Sept.).

Avalle, M.—Lateral Compression of Thin-walled Tubes: Strain Measurement by Image Analysis, 231-235 (Sept.).

Bay, B. K.—Digital Volume Correlation: Three-dimensional Strain Mapping Using X-ray Tomography, 217-226 (Sept.).

Bennett, T.—A Fiber Optic Sensor for Transverse Strain Measurement, 202-209 (Sept.).

Bentley, W.—A New Approach for Improving Ballistic Performance of Composite Armor, 103-110 (June).

Bernard, M.—Cyclic Stress-strain Data Analysis Under Biaxial Tensile Stress State, 92-102 (June).

Brown, T. D.—Static and Dynamic Response of a Multiplexed-array Piezoresistive Contact Sensor, 317-323 (Dec.).

Bui-Quoc, T.—Cyclic Stress-strain Data Analysis Under Biaxial Tensile Stress State, 92-102 (June).

Cadoni, E.—Study of the Mechanical Properties of Plain Concrete Under Dynamic Loading, 137-141 (June).

Callaghan, J. J.—Static and Dynamic Response of a Multiplexed-array Piezoresistive Contact Sensor, 317-323 (Dec.).

Carrión, F. J.—Simplified Experimental Calibration for a Tridilosa-type Bridge Finite Element Model, 324-328 (Dec.).

Chacko, S. R.—A Procedure for Correction of Creep in Foam Rubber Optical Pressure Measurement Techniques, 125-131 (June).

Chai, Y. H.—Characterization of Story-level Seismic Damage Using an Energy-based Damage Model, 53-61 (Mar.).

Chen, W.—A Split Hopkinson Bar Technique for Low-impedance Materials, 81-85 (June).

Cheng, G.—Compression Strain Measurement by Digital Speckle Correlation, 62-65 (Mar.).

Chiang, F. P.—Whole-field Residual Stress Measurement in Rail Using Moiré Interferometry and Twyman/Green Interferometry via Thermal Annealing, 71-76 (Mar.).

Clos, R.—Limiting Conditions for Compression Testing of Flat Specimens in the Split Hopkinson Pressure Bar, 343-348 (Dec.).

Daniel, I. M.—Determination of Shear Modulus of Single Fibers, 284-286 (Dec.).

Daniel, I. M.—Experimentation and Modeling of Composite Materials, 1-19 (Mar.).

De Rijck, J.J.M.—A Thin-Sheet, Combined Tension and Bending Specimen, 171-176 (Sept.).

Díaz, F. V.—Impact-induced Transient Deformation Analysis by Means of Digital Speckle Pattern Interferometry, 311-316 (Dec.).

Edwards, R. L.—Tensile Testing of Polysilicon, 162-170 (Sept.).

Evans, K. E.—Interpretation of Experimental Data for Poisson's Ratio of Highly Nonlinear Materials, 356-362 (Dec.).

Fabela, M. J.—Simplified Experimental Calibration for a Tridilosa-type Bridge Finite Element Model, 324-328 (Dec.).

Fawaz, S. A.—A Thin-Sheet, Combined Tension and Bending Specimen, 171-176 (Sept.).

Forrestal, M. J.—A Split Hopkinson Bar Technique for Low-impedance Materials, 81-85 (June).

Fournier, N.—Phase-stepped Deflectometry Applied to Shape Measurement of Bent Plates, 66-70 (Mar.).

Freese, C. E.—A Multilevel Treatment of Moiré Fringe Data Using Finite Elements, 304-310 (Dec.).

Fyhrie, D. P.—Digital Volume Correlation: Three-dimensional Strain Mapping Using X-ray Tomography, 217-226 (Sept.).

Gee, L.—A Multilevel Treatment of Moiré Fringe Data Using Finite Elements, 304-310 (Dec.).

Goglio, L.—Lateral Compression of Thin-walled Tubes: Strain Measurement by Image Analysis, 231-235 (Sept.).

Gong, X. L.—Investigation on Mechanism of Plastic Deformation by Digital Speckle Pattern Interferometry, 25-29 (Mar.).

Goyal, S.—Improving Impact Tolerance of Portable Electronic Products: Case Study of Cellular Phones, 43-52 (Mar.).

Grédiac, M.—Novel Procedure for Complete In-plane Composite Characterization Using a Single T-shaped Specimen, 142-149 (June).

Grédiac, M.—Phase-stepped Deflectometry Applied to Shape Measurement of Bent Plates, 66-70 (Mar.).

Green, R. E.—High-sensitivity Laser-based Ultrasonic C-scan System for Materials Inspection, 329-334 (Dec.).

Haake, S. J.—The Application of Evolutionary and Maximum Entropy Algorithms to Photoelastic Spectral Analysis, 265-273 (Dec.).

Hinds, G.—Buckling of Composite Panels Subjected to Biaxial Loading, 191-201 (Sept.).

Ifju, P.—Sensitivity of the Shear Gage to Normal Strains, 236-241 (Sept.).

Jecić, S.—Experimental Caustics Analysis in Fracture Mechanics of Anisotropic Materials, 177-183 (Sept.).

Kaufmann, G. H.—Impact-induced Transient Deformation Analysis by Means of Digital Speckle Pattern Interferometry, 311-316 (Dec.).

Kidd, M. D.—Experimental Examination of Bicycle Chain Forces, 278-283 (Dec.).

Kobayashi, A. S.—Axial Crack Propagation and Arrest in a Pressurized Cylinder: An Experimental-numerical Analysis, 256-264 (Dec.).

Kobayashi, A. S.—Process Zone of Polycrystalline Alumina, 20-24 (Mar.).

Kosai, M.—Axial Crack Propagation and Arrest in a Pressurized Cylinder: An Experimental-numerical Analysis, 256-264 (Dec.).

Labibes, K.—Study of the Mechanical Properties of Plain Concrete Under Dynamic Loading, 137-141 (June).

Lagarde, A.—Two-wavelength Method for Full-field Automated Photoelasticity, 274-277 (Dec.).

Lambros, J.—A Novel Technique for the Fabrication of Laboratory Scale Model Functionally Graded Materials, 184-190 (Sept.).

Lanza di Scalea, F.—High-sensitivity Laser-based Ultrasonic C-scan System for Materials Inspection, 329-334 (Dec.).

LaVan, D. A.—Tensile Testing of Microsamples, 210-216 (Sept.).

Lawrence, C. M.—A Fiber Optic Sensor for Transverse Strain Measurement, 202-209 (Sept.).

Li, H.—A Novel Technique for the Fabrication of Laboratory Scale Model Functionally Graded Materials, 184-190 (Sept).

Loch, N. E.—Experimental Examination of Bicycle Chain Forces, 278-283 (Dec.).

Lozano, A.—Simplified Experimental Calibration for a Tridilosa-type Bridge Finite Element Model, 324-328 (Dec.).

Lucanin, V.—Ultimate Load-bearing Capacity of the Corrugated Floor Sheet in Railroad Vehicles, 150-153 (June).

Mazzeranghi, A.—Methodology for Minimizing Effects of Temperature in Monitoring with the Acousto-ultrasonic Technique, 86-91 (June).

Miskioglu, I.—Determination of Residual Stress Fields Beneath a Vickers Indentation Using Photoelasticity, 227-230 (Sept.).

Nelson, D. V.—A Fiber Optic Sensor for Transverse Strain Measurement, 202-209 (Sept.).

Niu, X.—Sensitivity of the Shear Gage to Normal Strains, 236-241 (Sept.).

Otto, J. K.—Static and Dynamic Response of a Multiplexed-array Piezoresistive Contact Sensor, 317-323 (Dec.).

Pacey, M. N.—The Application of Evolutionary and Maximum Entropy Algorithms to Photoelastic Spectral Analysis, 265-273 (Dec.).

Parameswaran, V.—A New Approach for Improving Ballistic Performance of Composite Armor, 103-110 (June).

Paris, P.-A.—Phase-stepped Deflectometry Applied to Shape Measurement of Bent Plates, 66-70 (Mar.).

Park, S. W.—Separation of Elastic Waves in Split Hopkinson Bars Using One-point Strain Measurements, 287-294 (Dec.).

Patel, D. M.—Improving Impact Tolerance of Portable Electronic Products: Case Study of Cellular Phones, 43-52 (Mar.).

Patterson, E. A.—The Application of Evolutionary and Maximum Entropy Algorithms to Photoelastic Spectral Analysis, 265-273 (Dec.).
Patterson, E. A.—The Effects fo Surface Topography on the Method of Caustics, 335-342 (Dec.).
Peterson, M. L.—Prediction of Longitudinal Disturbances in a Multimode Cylindrical Waveguide, 36-42 (Mar.).
Pierron, F.—Novel Procedure for Complete In-plane Composite Characterization Using a Single T-shaped Specimen, 142-149 (June).
Plouzennec, N.—Two-wavelength Method for Full-field Automated Photoelasticity, 274-277 (Dec.).
Prakash, V.—A Modified Torsional Kolsky Bar for Investigating Dynamic Friction, 295-303 (Dec.).
Prosser, R. A.—A New Approach for Improving Ballistic Performance of Composite Armor, 103-110 (June).
Rabin, Y.—A Model for the Time Response of Solid-embedded Thermocouples, 132-136 (June).
Rajagopalan, S.—A Modified Torsional Kolsky Bar for Investigating Dynamic Friction, 295-303 (Dec.).
Reuben, R. L.—Experimental Examination of Bicycle Chain Forces, 278-283 (Dec.).
Rhee, J.—Thermoelastic-numerical Hybrid Analysis of Holes and Cracks in Composites, 349-355 (Dec.).
Rittel, D.—A Model for the Time Response of Solid-embedded Thermocouples, 132-136 (June).
Rowlands, R. E.—Thermoelastic-numerical Hybrid Analysis of Holes and Cracks in Composites, 349-355 (Dec.).
Saad, M.—Digital Volume Correlation: Three-dimensional Strain Mapping Using X-ray Tomography, 217-226 (Sept.).
Santare, M. H.—A Novel Technique for the Fabrication of Laboratory Scale Model Functionally Graded Materials, 184-190 (Sept.).
Sapna, G. H. III—A Novel Technique for the Fabrication of Laboratory Scale Model Functionally Graded Materials, 184-190 (Sept.).
Semenski, D.—Experimental Caustics Analysis in Fracture Mechanics of Anisotropic Materials, 177-183 (Sept.).
Sharpe, W. N., Jr.—Tensile Testing of Polysilicon, 162-170 (Sept.).
Sharpe, W. N., Jr.—Tensile Testing of Microsamples, 210-216 (Sept.).
Shimamoto, A.—Local Crack Tip Strain Behavior During Fatigue Crack Initiation and Propagation in Polycarbonate, 111-116 (June).
Shimamoto, A.—Axial Crack Propagation and Arrest in a Pressurized Cylinder: An Experimental-numerical Analysis, 256-264 (Dec.).
Shukla, A.—A New Approach for Improving Ballistic Performance of Composite Armor, 103-110 (June).
Sivakumar, S. M.—A Procedure for Correction of Creep in Foam Rubber Optical Pressure Measurement Techniques, 125-131 (June).
Singhatanadgid, P.—Buckling of Composite Panels Subjected to Biaxial Loading, 191-201 (Sept.).
Smith, C. W.—Interpretation of Experimental Data for Poisson's Ratio of Highly Nonlinear Materials, 356-362 (Dec.).
Smith, T. S.—Digital Volume Correlation: Three-dimensional Strain Mapping Using X-ray Tomography, 217-226 (Sept.).
Stetson, K. A.—Problems of Holographic Interferometry, 249-255 (Dec.).
Subhash, G.—Determination of Residual Stress Fields Beneath a Vickers Indentation Using Photoelasticity, 227-230 (Sept.).
Surrel, Y.—Phase-stepped Deflectometry Applied to Shape Measurement of Bent Plates, 66-70 (Mar.).
Surrel, Y.—Novel Procedure for Complete In-plane Composite Characterization Using a Single T-shaped Specimen, 142-149 (June).
Tan, P. W.—Axial Crack Propagation and Arrest in a Pressurized Cylinder: An Experimental-numerical Analysis, 256-264 (Dec.).
Tomlinson, R. A., and Patterson, E. A.—The Effects of Surface Topography on the Method of Caustics, 335-342 (Dec.).
Toyooka, S.—Investigation on Mechanism of Plastic Deformation by Digital Speckle Pattern Interferometry, 25-29 (Mar.).
Tran, D. K.—Process Zone of Polycrystalline Alumina, 20-24 (Mar.).
Tsai, C.-L.—Determination of Shear Modulus of Single Fibers, 284-286 (Dec.).
Tuttle, M.—Buckling of Composite Panels Subjected to Biaxial Loading, 191-201 (Sept.).
Turner, K. T.—Tensile Testing of Polysilicon, 162-170 (Sept.).
Udd, E.—A Fiber Optic Sensor for Transverse Strain Measurement, 202-209 (Sept.).
Umezaki, E.—Local Crack Tip Strain Behavior During Fatigue Crack Initiation and Propagation in Polycarbonate, 111-116 (June).
Upasani, S.—Improving Impact Tolerance of Portable Electronic Products: Case Study of Cellular Phones, 43-52 (Mar.).
Vangi, D.—Methodology for Minimizing Effects of Temperature in Monitoring with the Acousto-ultrasonic Technique, 86-91 (June).
Vázquez-Vega, D.—Simplified Experimental Calibration for a Tridilosa-type Bridge Finite Element Model, 324-328 (Dec.).
Wang, B. S.—Whole-field Residual Stress Measurement in Rail Using Moiré Interferometry and Twyman/Green Interferometry via Thermal Annealing, 71-76 (Mar.).
Wang, X. Z.—The Application of Evolutionary and Maximum Entropy Algorithms to Photoelastic Spectral Analysis, 265-273 (Dec.).
White, K. W.—Process Zone of Polycrystalline Alumina, 20-24 (Mar.).
Wootton, R. J.—Interpretation of Experimental Data for Poisson's Ratio of Highly Nonlinear Materials, 356-362 (Dec.).
Wu, S. Y.—Whole-field Residual Stress Measurement in Rail Using Moiré Interferometry and Twyman/Green Interferometry via Thermal Annealing, 71-76 (Mar.).
Yu, C. T.—Axial Crack Propagation and Arrest in a Pressurized Cylinder: An Experimental-numerical Analysis, 256-264 (Dec.).
Zencker, U.—Limiting Conditions for Compression Testing of Flat Specimens in the Split Hopkinson Pressure Bar, 343-348 (Dec.).
Zhang, B.—A Split Hopkinson Bar Technique for Low-impedance Materials, 81-85 (June).
Zhang, D.—Compression Strain Measurement by Digital Speckle Correlation, 62-65 (Mar.).
Zhang, X.—Compression Strain Measurement by Digital Speckle Correlation, 62-65 (Mar.).
Zhou, M.—Separation of Elastic Waves in Split Hopkinson Bars Using One-point Strain Measurements, 287-294 (Dec.).
Zouani, A.—Cyclic Stress-strain Data Analysis Under Biaxial Tensile Stress State, 92-102 (June).
Zuccarello, B.—Optimal Calculation Steps for the Evaluation of Residual Stress by the Incremental Hole-drilling Method, 117-124 (June).